

OCT 02 2002



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Raymond J. Dattwyler, Gerald Steinost, Daniel Dykhuizen, Benjamin J. Luft and Maria J.C. Gomes-Solecki

Application No.: 09/596,746

Group Art Unit: 1645

Filed: June 19, 2000

Examiner: Rodney P. Swartz

For: GROUPS OF *BORRELIA BURGDORFERI* AND *BORRELIA AFZELII*
THAT CAUSE LYME DISEASE IN HUMANS

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202

on 9-26-02 Melissa Bertoline
Date Signature

Melissa Bertoline
Typed or printed name of person signing certificate

RECEIVED

OCT 08 2002

TECH CENTER 1600/2900

TRANSMITTAL OF FORMAL DRAWINGS

Assistant Commissioner for Patents
P.O. Box 2327
Arlington, VA 22202

Sir:

Transmitted herewith are formal drawings consisting of 8 sheets, Figures 1 through 8, for filing in the subject patent application.

Acceptance of the formal drawings is respectfully requested.

Respectfully submitted,
HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Sandra A. Brockman
Sandra A. Brockman
Registration No. 44,045
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133

Date: 9-26-02



App No. 09/596,746
Title: Groups of *Borrelia burgdorferi* and ...
Inventors: Raymond J. Dattwyler et al.

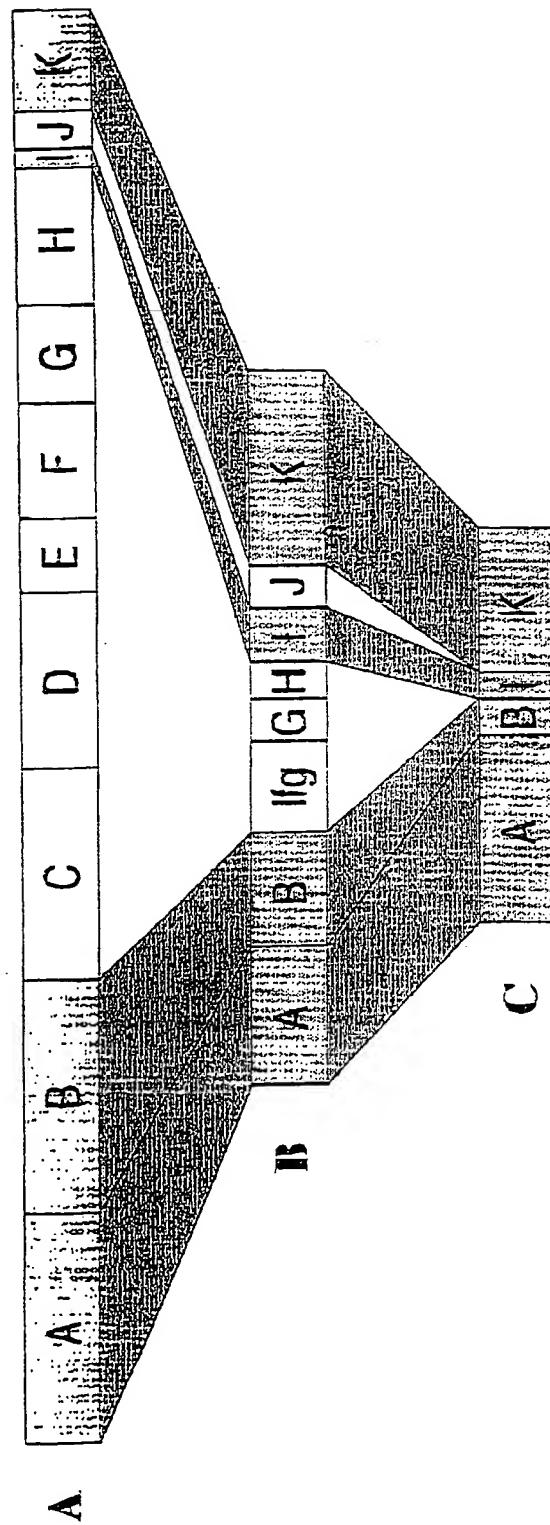


Fig. 1

RECEIVED
OCT 08 2002
TECH CENTER 1600/2900

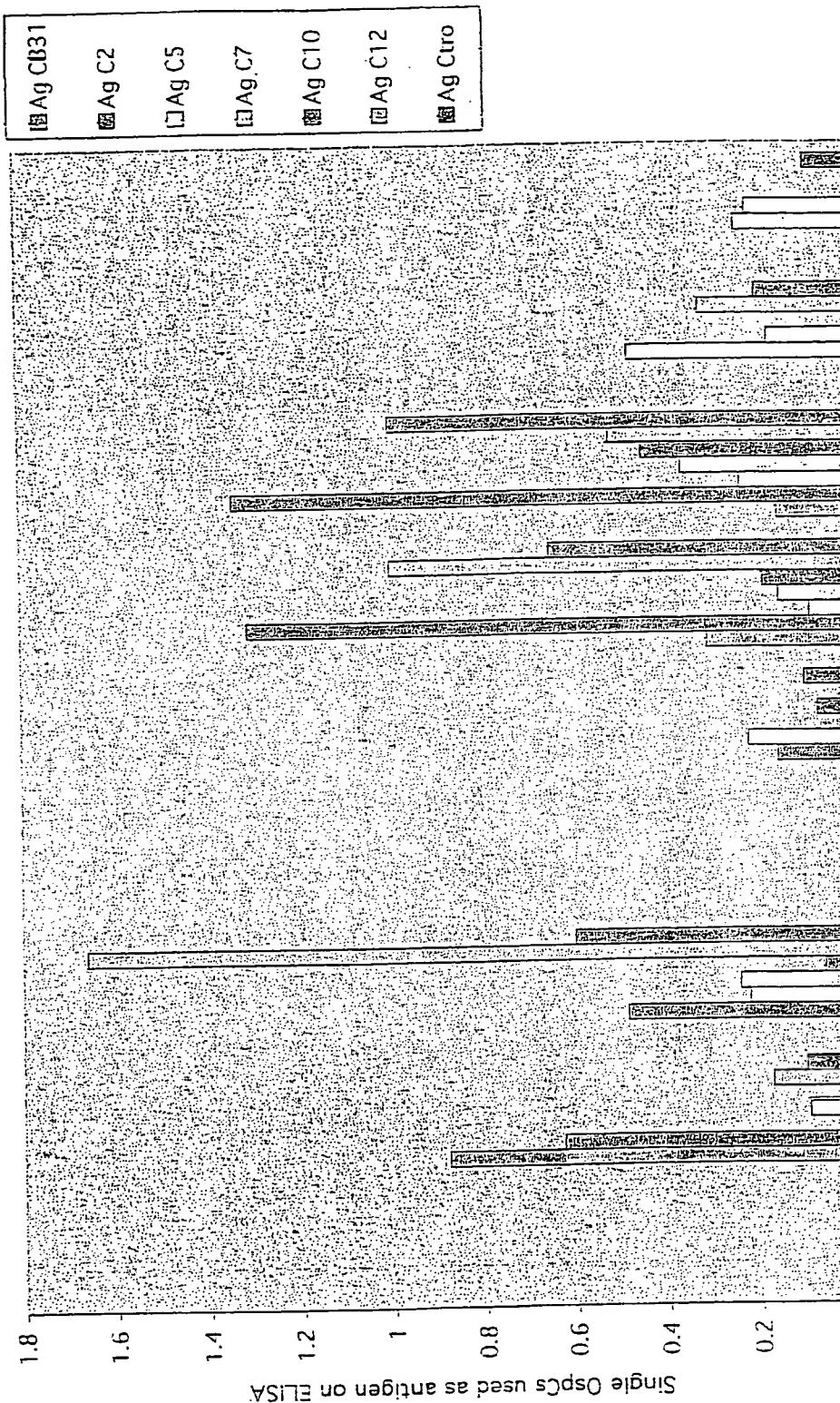
App No.: 09/596,746
Title: Groups of *Borrelia burgdorferi* and ...
Inventors: Raymond J. Dattwyler et al.



RECEIVED

OCT 08 2002

TECH CENTER 1600/2900



Serum from OspC-RCBIP vaccinated mice (1st Bleed)

Fig. 2

O I P
OCT 02 2002
PATENT & TRADEMARK OFFICE
App No.: 09/596,746
Title: Groups of *Borrelia burgdorferi* and ...
Inventors: Raymond J. Dattwyler et al.

RECEIVED

OCT 08 2002

TECH CENTER 1600/2900

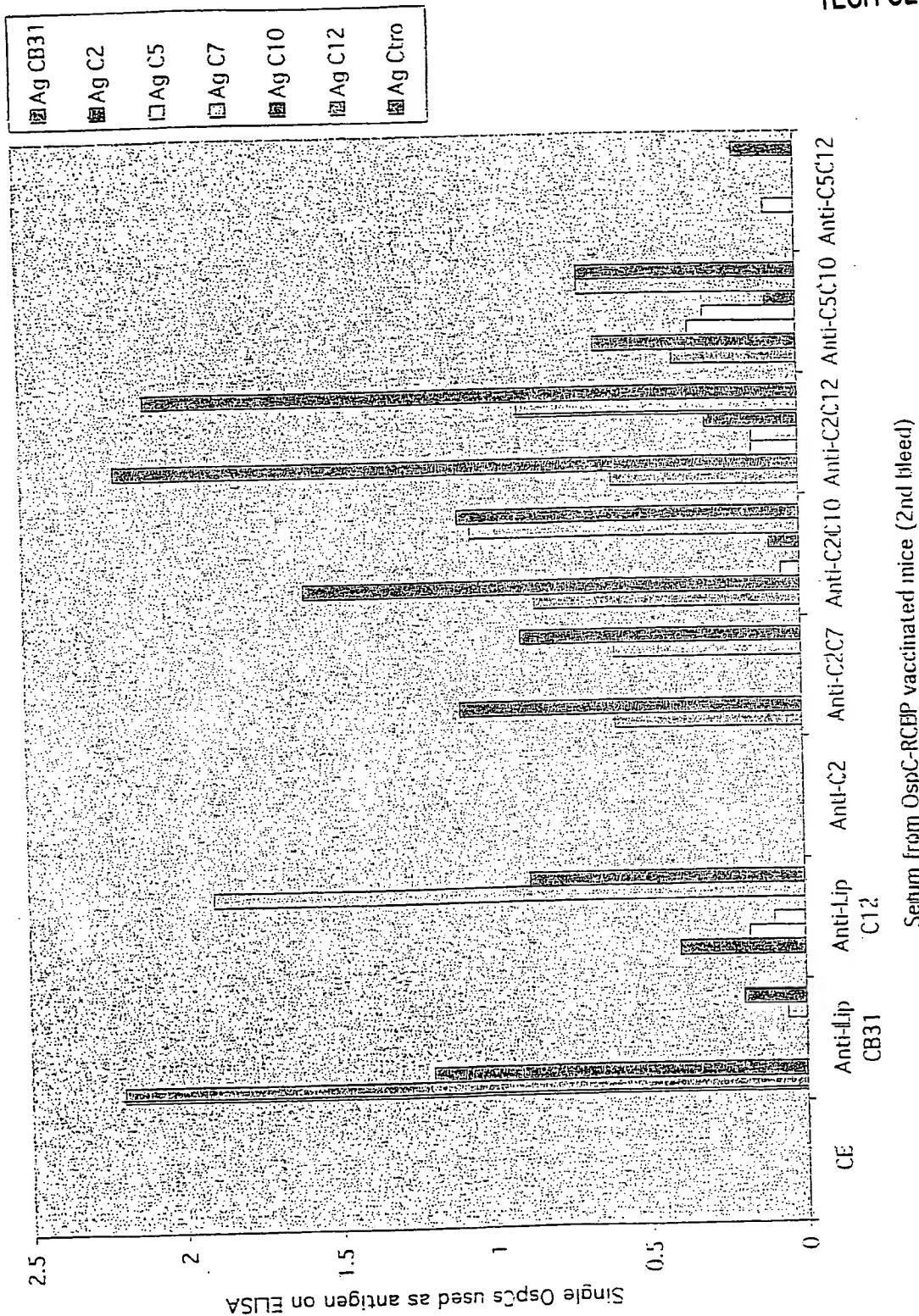


Fig. 3

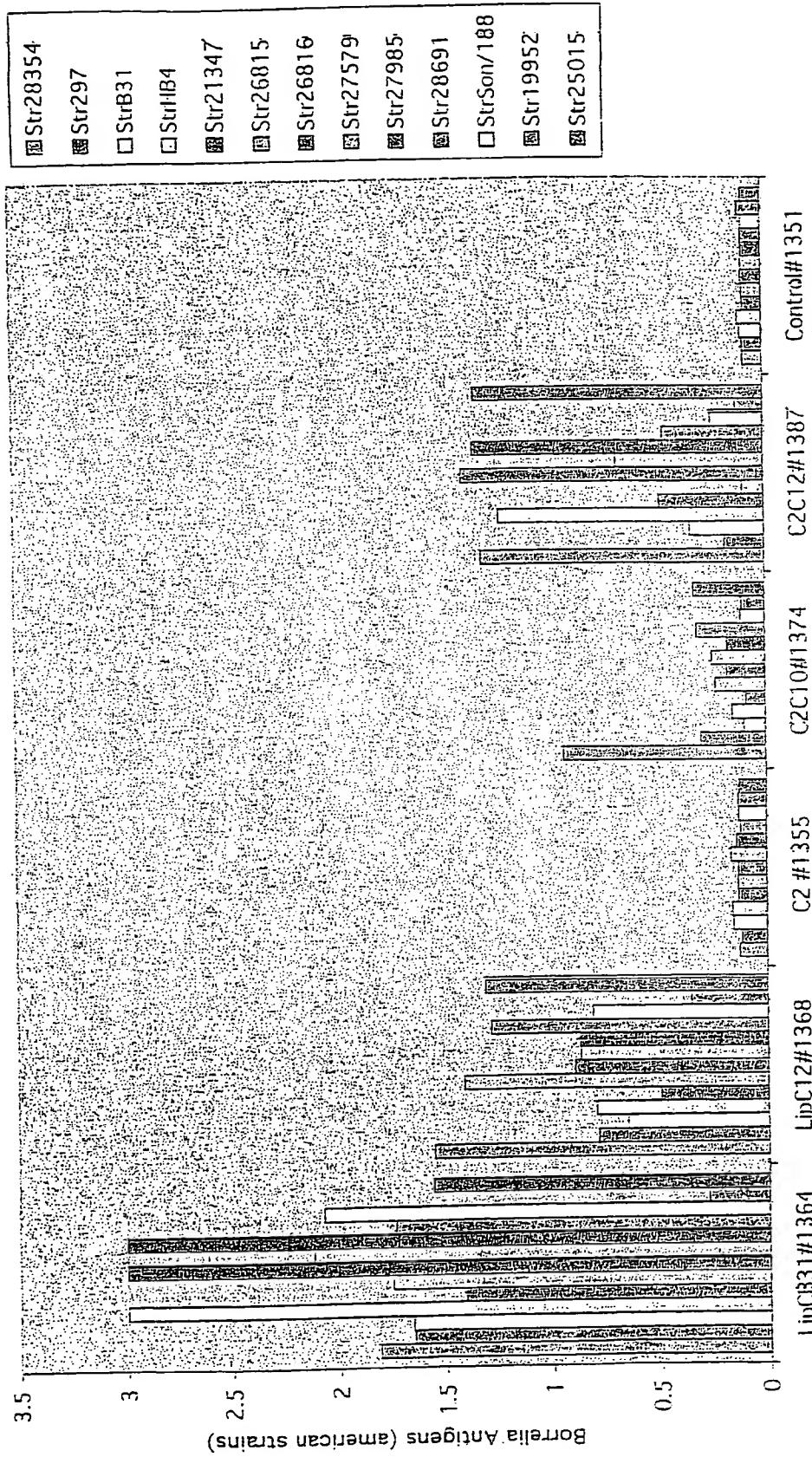


App No: 09/596,746
 Title: Groups of *Borrelia burgdorferi* and ...
 Inventors: Raymond J. Dattwyler et al.

RECEIVED

OCT 08 2002

TECH CENTER 1600/2900



Serum from OspC-RCBP Vaccinated mice

Fig. 4



App.: 09/596,746
Title: Groups of *Borrelia burgdorferi* and ...
Inventors: Raymond J. Dattwyler et al.

RECEIVED

OCT 08 2002

TECH CENTER 1600/2900

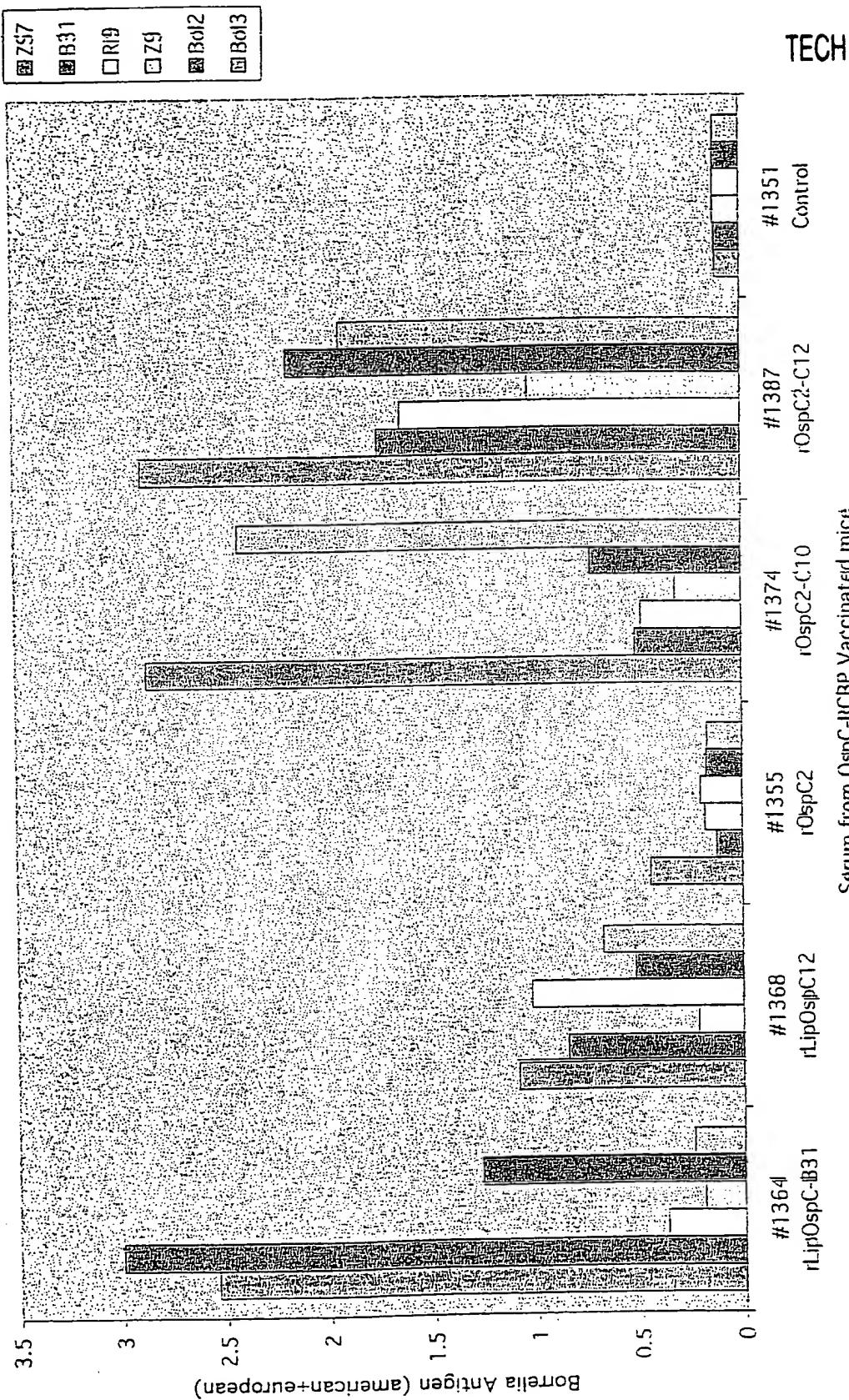


Fig. 5

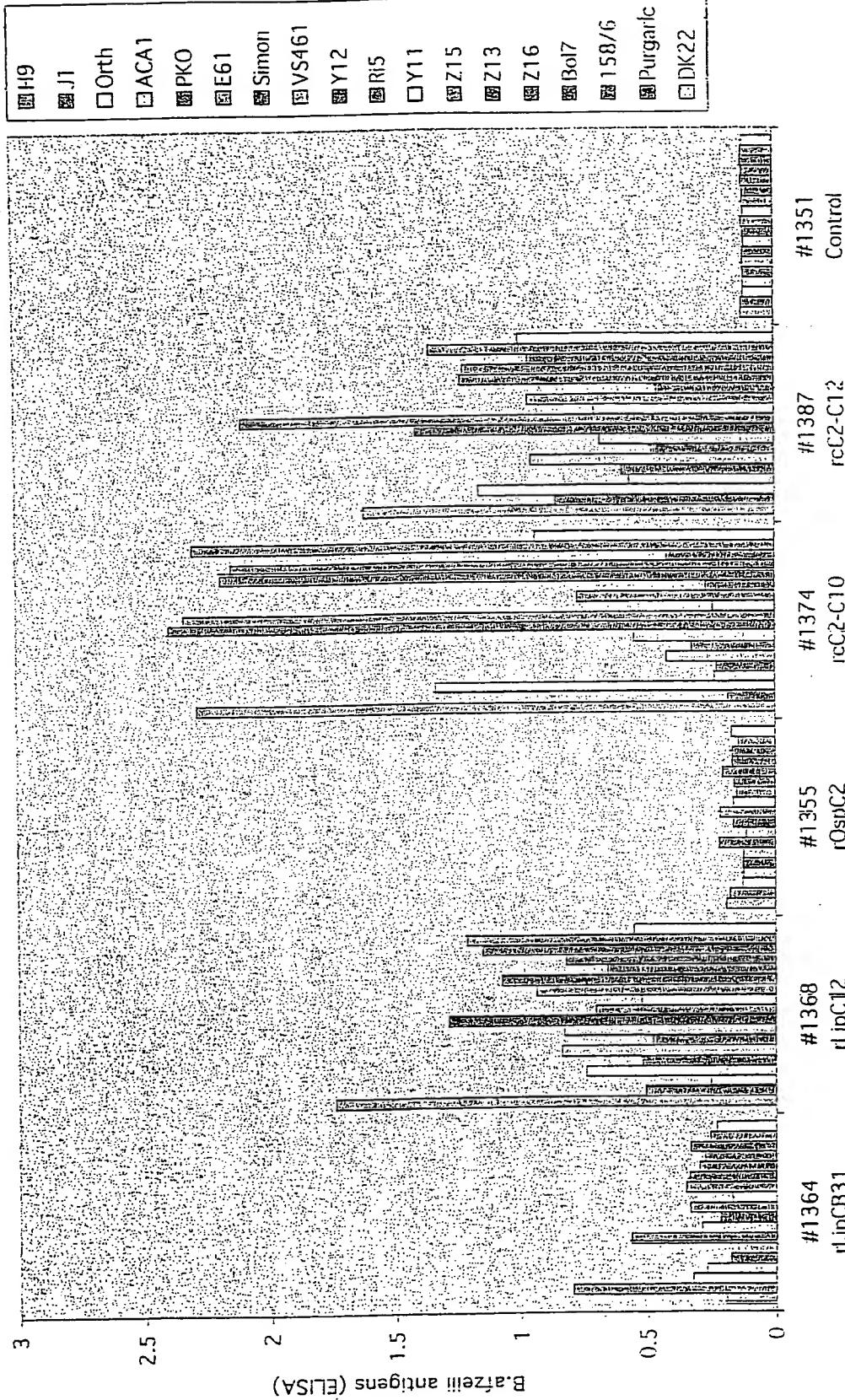


App. No.: 09/596,746
Title: Groups of *Borrelia burgdorferi* and ...
Inventors: Raymond J. Dattwyler et al.

RECEIVED

OCT 08 2002

TECH CENTER 1600/29





App No. 09/596,746
 Title: Groups of *Borrelia burgdorferi* and ...
 Inventors: Raymond J. Dattwyler et al.

RECEIVED

OCT 08 2002

TECH CENTER 1600/2900

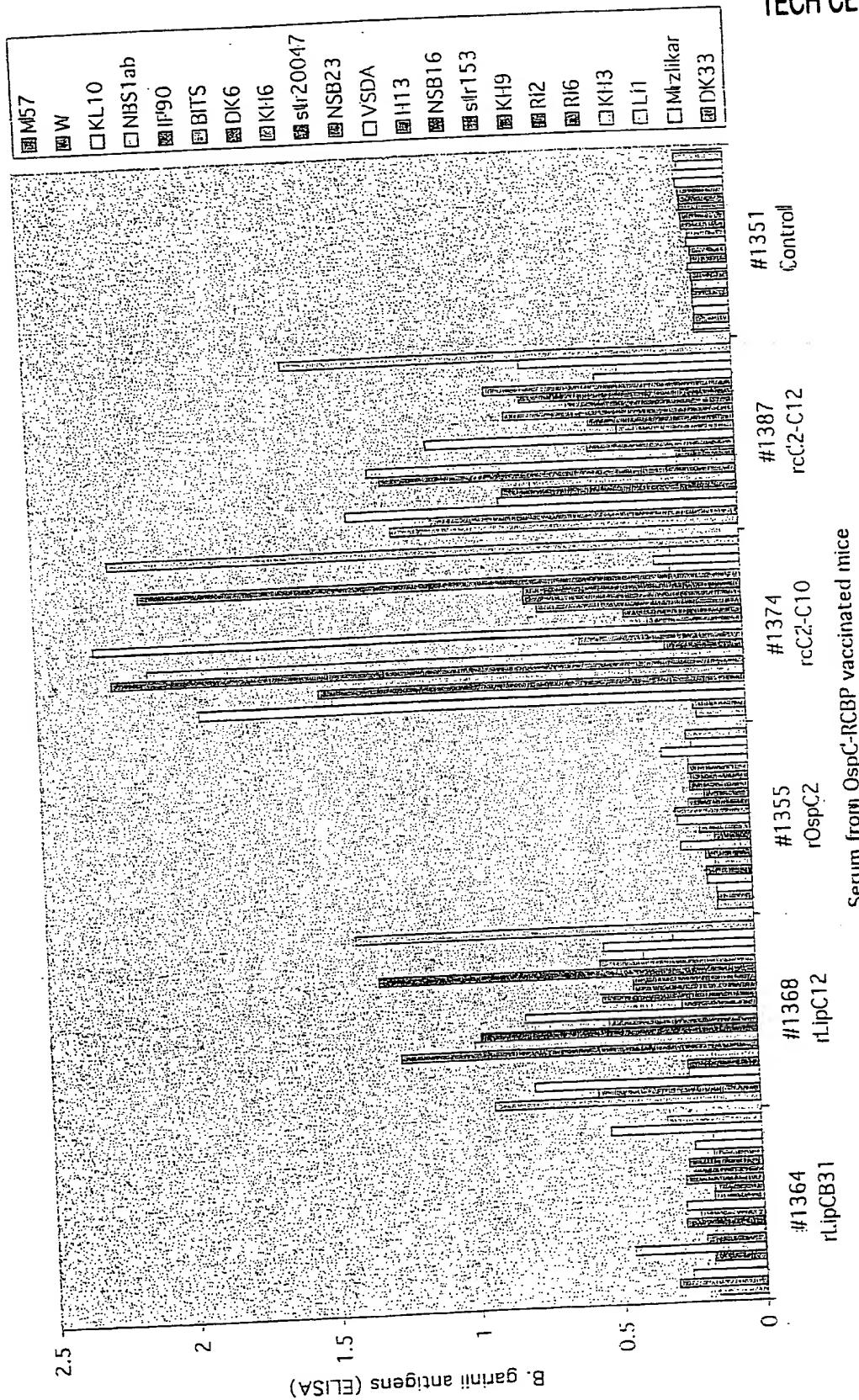


Fig. 7



App. No.: 09/596,746
 Title: Groups of *Borrelia burgdorferi* and
 Inventors: Raymond J. Dattwyler et al.

RECEIVED

OCT 08 2002

TECH CENTER 1600/2900

Early Lyme: #P(total)				Sensitivity		Potential cross-reactivity: #P(Total Tested)				Specificity		
EMA	EA	Ac. Dissem.	Ac. Convul.	#P(Total)	(%)	Syphilis	SLE & RA	Normals End.	Normals NonEnd.	#P(Total)	(%)	
C1 (chrt1)	6(10)	ND	4(10)	8(8)	18(28)	64%	1(10)	1(10)	2(10)	0(8)	4(38)	11%
C2 (chrt2)	4(10)	ND	5(10)	8(8)	17(28)	61%	0(10)	2(10)	0(8)	0(8)	4(38)	11%
C1C10 (chrt3)	7(10)	ND	4(10)	5(8)	16(28)	57%	4(10)	1(10)	2(10)	0(8)	7(38)	18%
C1C12 (chrt4)	2(10)	ND	3(10)	5(8)	10(28)	36%	2(10)	0(10)	0(10)	ND	2(30)	7%
B31C10 (chrt5)	8(10)	ND	6(10)	5(8)	19(28)	68%	2(10)	2(10)	4(10)	0(8)	8(38)	21%
B31C12 (chrt6)	7(10)	ND	6(10)	6(8)	19(28)	68%	1(10)	1(10)	1(10)	0(8)	3(38)	82%
C2C7 (chrt7)	5(10)	6(8)	3(10)	4(7)	18(35)	51%	1(11)	0(10)	1(20)	0(8)	2(49)	4%
C2C10 (chrt8)	4(10)	7(8)	5(10)	4(7)	20(35)	57%	0(11)	0(10)	1(20)	0(8)	1(49)	2%
C2C12 (chrt9)	5(10)	7(8)	6(10)	4(7)	22(35)	63%	0(11)	1(10)	3(20)	0(8)	4(49)	89%
C5C7 (chrt10)	7(10)	ND	4(10)	5(8)	16(28)	57%	2(10)	2(10)	0(10)	ND	4(30)	13%
C5C10 (chrt11)	6(10)	ND	4(10)	5(8)	15(28)	54%	0(10)	0(10)	0(10)	ND	0(30)	0%
C5C12 (chrt12)	8(10)	ND	8(10)	6(8)	22(28)	79%	5(10)	3(10)	3(10)	0(8)	11(38)	29%

EMA = Erythema Migrans Acute

EA = Acute Disseminated

Ac. Dissem.= Acute Disseminated

Ac. Convul.= Acute Convalescent

#P = Number of positives

SLE = Systemic Lupus Erythematosus

RA = Rheumatoid Arthritis

End. = Endemic Field Workers

NonEnd. = Non Endemic

Fig. 8